



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,921	12/29/2000	Robert J. O'Donnell	015290-465	6804
21839	7590	04/07/2004	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P			TRAN, BINH X	
POST OFFICE BOX 1404			ART UNIT	PAPER NUMBER
ALEXANDRIA, VA 22313-1404			1765	

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/749,921

Applicant(s)

O'DONNELL ET AL.

Examiner

Binh X Tran

Art Unit

1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4-16-01 & 09-16-02
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The examiner considers all references submitted in the information disclosure statement. See PTO 1449 attachment for further detail.

Claim Interpretation

2. In claim 16, the examiner considers there is no such thing as perfectly smooth surface. Each surface must have some degree of roughness if we measure it to the atomic or molecular size level. Therefore, a prior art teaching of a component surface in contact with the plasma sprayed coating will read on the limitation of "roughened surface in contact with the plasma sprayed coating" since the prior art component's surface must have a certain degree of roughness.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 8-12, 14-15, 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakagawa et al. (WO 99/63584).

Respect to claim 8, Nakagawa discloses a component of the semiconductor processing equipment comprising a liquid crystalline polymer on the outer surface thereof (page 5 lines 20-30 or page 6 lines 1-12, Fig 1C). Respect to claims 9-10,

Nakagawa discloses the liquid crystal polymer was coated on the surface of the aluminum surface substrate (page 7).

Respect to claims 11-12, Nakagawa discloses that the substrate is an alumite-treated aluminum (pages 7 lines 13-15 and/or lines 21-24). It is known in the art that "alumite" is another just term for alumina or aluminum oxide. Further, it is known that the alumite treatment an anodized process of aluminum (See prior arts made of record). Therefore, the examiner interprets that Nakagawa's teaching of "alumite treated aluminum" read on the limitation of claims 11-12.

Respect to claims 14-15, Nakagawa discloses the component is a chamber liner and the liquid crystal polymer comprises a preformed sheet covering the surface of a substrate (abstract). Respect to claim 18, Nakagawa discloses the plasma chamber comprises at least one component (col. 4 line 60 to col. 5 lines 25).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 13, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa in view of Clarke et al. (US 6,120,854).

Respect to claim 13, Nakagawa fails to disclose the liquid crystalline polymer comprises a plasma sprayed coating. However, Nakagawa clearly discloses the liquid crystalline polymer was applied with a spray gun (col. 4 lines 60-63). In a liquid

crystalline polymer process, Clarke discloses the liquid crystalline polymers comprise a plasma sprayed coating using a spray gun (col. 3). It would have been obvious to one having ordinary skill in the art, at the time of invention, to use plasma sprayed coating to form liquid crystalline polymer because it would result in a uniform thickness. Respect to claim 16, as discussed above, the examiner that the surface that contact with the plasma sprayed coating must have some degree of roughness.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa in view of McCullough (US 6,048,919).

Respect to claim 17, Nakagawa fails to disclose the liquid crystalline polymer contains filler. McCullough discloses that the liquid crystalline polymer contains filler resulting in performance superior. It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Nakagawa in view McCullough by using filler in liquid crystalline polymers because it reduces the number of transitions surfaces.

Response to Arguments

8. Applicant's arguments with respect to the rejection of claims 8-18 have been considered but are moot in view of the new ground(s) of rejection.

9. Respect to the claim 16 interpretation, the applicants argue that the limitation "roughen surface in contact with the plasma sprayed coating" should be interpreted in light of the specification. According to applicants, " 'a roughened surface' as recited in claim 16 means a surface subjected to a surface roughening treatment before the plasma sprayed coating is applied". The examiner disagrees. First, the applicants never claim the process to make the "roughened surface" in claim 16. Second, the

examiner provides a rationale to prove that it is impossible for any surface to be perfectly smooth. Thus, the examiner can interpret that any surface must have some degree of roughness. Claim 16 is drawn to the product. Claim 16 is not a process claim. According to the MPEP, "Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product".

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Okamura et al. (US 6,251,216) discloses that "alumite" treatment of aluminum is an anodizing coating process of aluminum to produce aluminum oxide (aka alumina) (See col. 1 lines 28-35).

Hiratsuka et al. (US 6,319,325) discloses that alumite is also known as aluminum oxide (col. 6 lines 5-10).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh X Tran whose telephone number is (571) 272-1469. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine G Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Binh X. Tran

NADINE G. NORTON
SUPERVISORY PATENT EXAMINER
